

Docket No. AUS920010914US1

**CLAIMS:**

What is claimed is:

1. A computer program product in a computer readable medium containing a routine for writing a dump element,  
5 the routine comprising the steps of:

first instructions for checking a size of a current  
dump element against a threshold,  
second instructions, if the size is greater than  
said threshold, for  
10 formatting a first portion of the dump element  
which is the size of the threshold,  
writing said first portion of the dump element,  
setting the remaining portion of the dump element  
to be a new dump element and returning to the  
15 checking step;  
third instructions, if the size is less than or  
equal to said threshold, for  
formatting the dump element,  
writing said the dump element, and  
20 returning to a calling routine.

2. The computer program product of Claim 1, wherein  
said threshold is 64 kB.

3. The computer program product of Claim 1, wherein  
said routine performs recursive calls.

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4. The computer program product of Claim 1, further comprising, whenever the dump element or portion of the dump element are formatted and written, formatting and writing a header for the dump element.

- 5 5. A method for writing a dump element, the method comprising the steps of:

receiving parameters for the dump element including a  
first starting address and a first size parameter;  
if said first size parameter is not greater than a  
10 given threshold, then  
formatting said element,  
writing said element, then returning to a calling  
routine,  
if said first size parameter is greater than or equal  
15 to said given threshold, then  
setting a second starting address equal to said  
first starting address plus said threshold,  
setting a second size parameter equal to said first  
size parameter minus said threshold,  
20 setting said first size parameter to said threshold,  
calling said method recursively, and  
after said calling step, setting said first size  
parameter to said second size parameter,  
setting said first starting address to said  
25 second starting address, and going to said  
receiving step.

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6. The method of Claim 5, wherein said threshold is 64 kB.
7. The method of Claim 5, further comprising formatting and writing a header for said dump element.

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8. A computer system comprising:

a processor which is connected to receive input from at least a first device and to provide output through at least a second device, said processor being programmed to  
5 invoke, at the time of a system error, a routine which performs the following steps:

receiving parameters for the dump element including a first starting address and a first size parameter;

10 if said first size parameter is not greater than a given threshold, then  
formatting said element and a header describing said element,  
writing said element and said header, then  
15 returning to a calling routine,

else,

setting a second starting address equal to said first starting address plus said threshold,  
setting a second size parameter equal to said  
20 first size parameter minus said threshold,  
setting said first size parameter to said threshold,  
calling said routine recursively, and  
after said calling step, setting said first size  
25 parameter to said second size parameter,  
setting said first starting address to said second starting address, and going to said receiving step.

9. The computer system of Claim 8, wherein said  
30 threshold is 64 kB.

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10. The computer system of Claim 8, wherein said routine writes data to nonvolatile memory.

11. The computer system of Claim 8, further comprising writing a header each time a dump element or a portion of  
5 a dump element is written.

12. A computer system comprising:

means to receive information regarding a scan dump element to be written;

means to check the size of the scan dump element;

10 and

means to write a given block of data which is of a given size or less;

means to modify said information regarding the scan dump element;

15 wherein if the size of said scan dump element is not greater than said given size, said means to write is configured to write said scan dump element to nonvolatile memory, otherwise said means to write is configured to write a first portion of said scan dump element which is  
20 of said given size to nonvolatile memory, said means to modify is configured to modify said information to indicate the remaining portion of said element as a new element and to performs said wherein step again.

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13. The computer system of Claim 13, wherein said given size is 64 kB.

14. The computer system of Claim 13, wherein said means to write is also configured to write a header for each  
5 portion of an element which is written.

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